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# Basin Outlook Reports

## and Federal - State - Private Cooperative Snow Surveys

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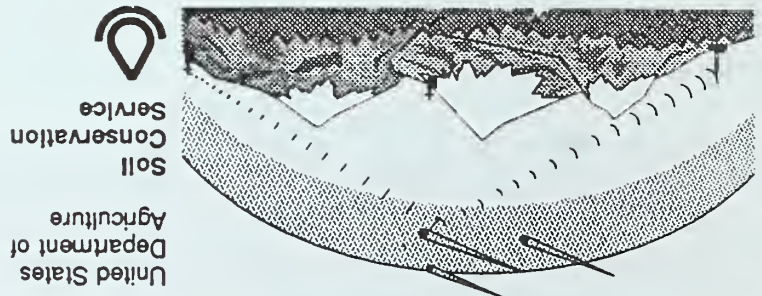
### *How forecasts are made*

Most of the annual streamflow in the Western United States originates as snowfall that has accumulated high in the mountains during winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Predictions are based on careful measurements of snow water equivalent at selected index points. Precipitation, temperature, soil moisture and antecedent streamflow data are combined with snowpack data to prepare runoff forecasts. Streamflow forecasts are coordinated by Soil Conservation Service and National Weather Service hydrologists. This report presents a comprehensive picture of water supply conditions for areas dependent upon surface runoff. It includes selected streamflow forecasts, summarized snowpack and precipitation data, reservoir storage data, and narratives describing current conditions.

Snowpack data are obtained by using a combination of manual and automated SNOTEL measurement methods. Manual readings of snow depth and water equivalent are taken at locations called snow courses on a monthly or semi-monthly schedule during the winter. In addition, snow water equivalent, precipitation and temperature are monitored on a daily basis and transmitted via meteor burst telemetry to central data collection facilities. Both monthly and daily data are used to project snowmelt runoff.

Forecast uncertainty originates from two sources: (1) uncertainty of future hydrologic and climatic conditions, and (2) error in the forecasting procedure. To express the uncertainty in the most probable forecast, four additional forecasts are provided. The actual streamflow can be expected to exceed the most probable forecast 50% of the time. Similarly, the actual streamflow volume can be expected to exceed the 90% forecast volume 90% of the time. The same is true for the 70%, 30%, and 10% forecasts. Generally, the 90% and 70% forecasts reflect drier than normal hydrologic and climatic conditions; the 30% and 10% forecasts reflect wetter than normal conditions. As the forecast season progresses, a greater portion of the future hydrologic and climatic uncertainty will become known and the additional forecasts will move closer to the most probable forecast.

# Basin Outlook Reports



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In addition to basin outlook reports, a Water Supply Forecast for the Western United States is published by the Soil Conservation Service and National Weather Service monthly, January through May. Reports may be obtained from the Soil Conservation Service, West National Technical Center, 511 Northwest Broadway, Room 248, Portland, OR 97209-3489.

## *Issued by*

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## *Released by*

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5/99



MAY 1991

## GENERAL OUTLOOK

## SUMMARY:

MAY 1, 1991: APRIL PRECIPITATION WAS 155% OF NORMAL STATE WIDE, AND VARIED FROM 197% OF AVERAGE IN THE COWLITZ -LEWIS BASIN TO 92% IN THE COLVILLE PEND OREILLE BASIN. YEAR-TO-DATE PRECIPITATION VARIES FROM 81% IN THE COLVILLE TO 137% IN THE WENATCHEE - CHELAN BASINS. APRIL TEMPERATURES WERE NEAR NORMAL AND VARIED FROM 1 DEGREES ABOVE IN THE WALLA WALLA BASIN TO 1 DEGREES BELOW IN THE OKANOGAN BASIN. MAY 1 RESERVOIR STORAGE IS GENERALLY GOOD THROUGHOUT THE STATE, WITH RESERVOIRS IN THE YAKIMA BASIN AT 124% OF AVERAGE AND 91% OF CAPACITY. FORECASTS FOR 1991 RUNOFF VARY FROM 161% OF AVERAGE FOR THE SIMILKAMEEN RIVER TO 65% ON MILL CREEK IN THE WALLA WALLA BASIN. THE SNOWPACK IS BELOW NORMAL STATE WIDE, BUT VARIES FROM 55% IN THE WALLA WALLA BASIN TO 144% IN THE CHELAN BASIN. WASHINGTON'S SNOTEL SITES ARE AVERAGING 90% OF NORMAL SNOWPACK ON MAY 1 (BY MAY 8, THE STATEWIDE AVERAGE WAS 94%). APRIL STREAMFLOWS VARIED FROM 264% OF NORMAL ON THE SIMILKAMEEN RIVER TO 49% ON THE SNAKE RIVER.

## SNOWPACK:

The first week of April saw several storms deposit rain and snow across Washington. Snowpack varies over the state from 144% of normal in the Chelan Basin to 55% in the Walla Walla Basin. The Yakima Basin is now at 80%. Snowpack along the west slopes of the Cascade Mountains includes the Green with 109%, the Cowlitz Basin with 78%, and the Skagit 143%. Snowpack in the Wenatchee Basin is 102% of normal; the Okanogan at 115%, and the Spokane at 88%. SNOTEL sites in Washington are showing snowpack 90% of average for May 1, state wide. Maximum snow cover is at Jasper Pass in the Baker River drainage, with 216 inches of depth and a water content of 109.0 inches. This site would normally have 93.0 inches of water content on May 1.

## PRECIPITATION:

April precipitation from National Weather Service stations was 155% of average statewide. The year-to-date precipitation statewide is 111% and varied from 137% of normal in the Wenatchee - Chelan Basin to 81% in the Colville-Pend Oreille Basin. April precipitation varied from 197% of average in the Cowlitz - Lewis Basin, to 92% in the Okanogan Basin. SNOTEL sites in Washington showed high elevation year-to-date precipitation values to be 112%. Maximum year-to-date precipitation was at the June Lake SNOTEL site near Mt. St. Helens, with 142.2 inches since October 1, 1990; normal for this site would be 134.0 inches.

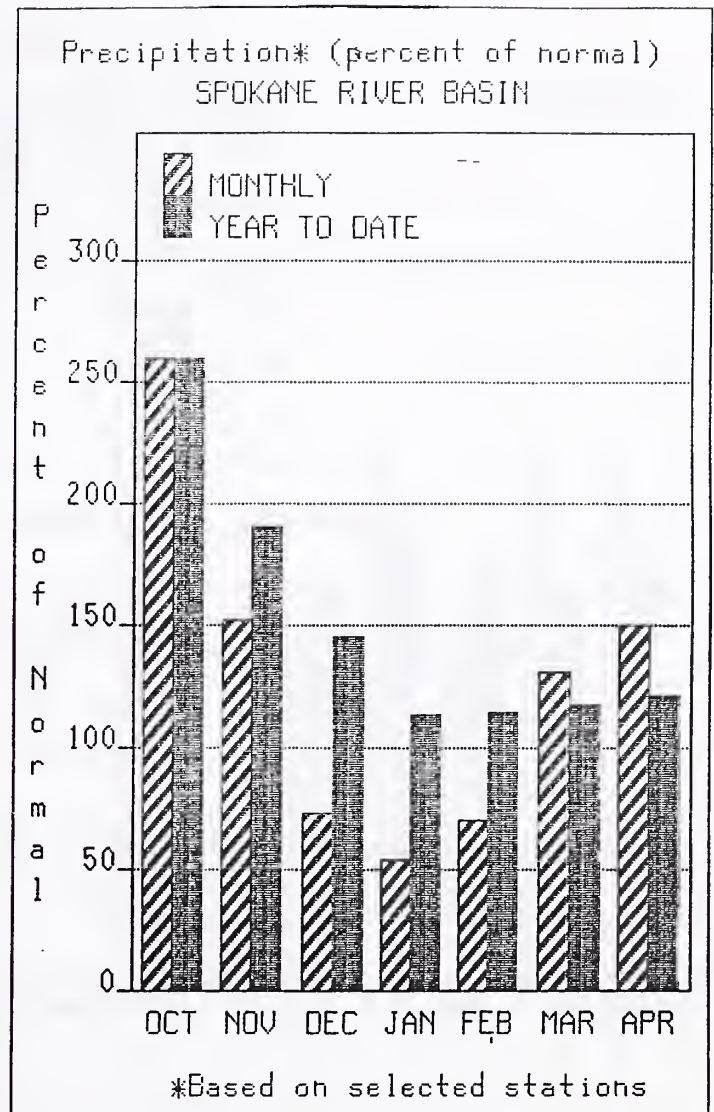
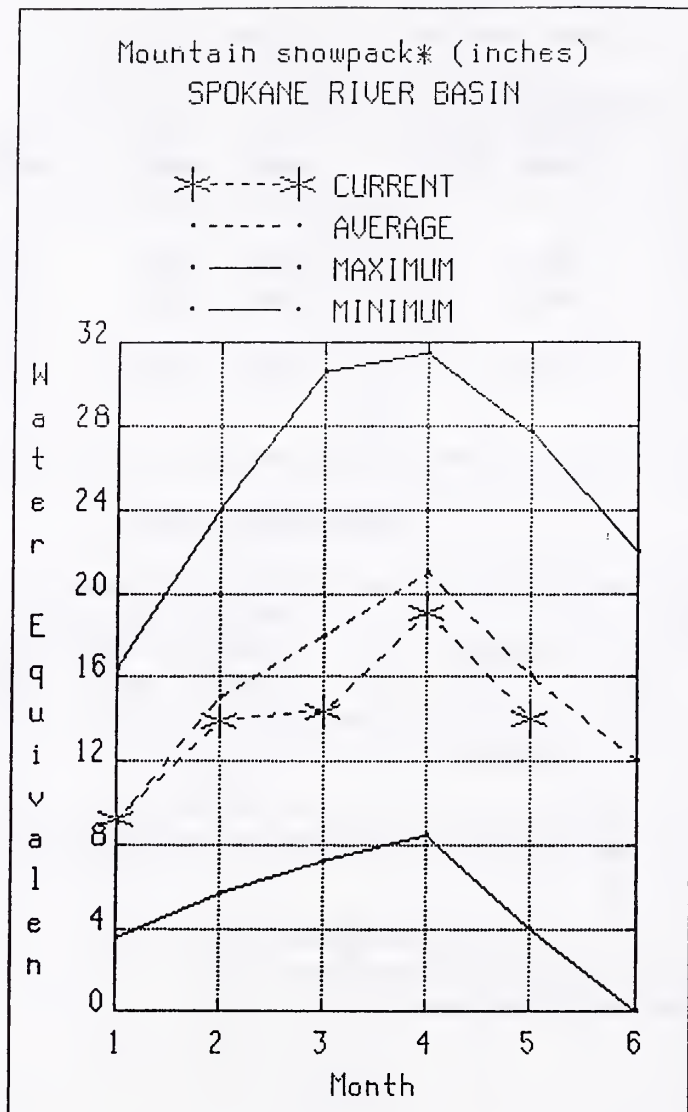
## RESERVOIRS:

Reservoir storage in Washington continues good, with storage above average for May 1. Reservoir storage in the Yakima Basin was 972,700 acre feet, 124% of normal. Storage at other reservoirs include Roosevelt at 53% of average, being drawn down for flood control and the Okanogan reservoirs at 121% of May 1 normal. The power generation reservoirs contain the following: Coeur d'Alene Lake, 277,200 acre feet, or 87% of normal; Chelan Lake, 396,800 acre feet, 88% of average and 59% of capacity, and Ross Lake at 93% of average, and 43% of capacity.

## STREAMFLOW:

April streamflows were generally above average in northern Washington, and below average in southern Washington. Streamflows were the following percent of normal; the Cowlitz River, 139%; the Walla Walla River, 89%; the Spokane River, 107%; the Columbia at the Canadian border, 123%. The Wenatchee River 124% and the Methow with 130% continued high. The Similkameen River was the highest in the state, at 264%, and the Okanogan River was 176%. Forecasts for summer streamflow are similar to last month and vary from 161% of average for the Similkameen River to 65% of normal on Mill Creek in the Walla Walla River Basin. April forecasts for some west side streams include: Cedar River, 89%; Skagit River, 135%; and the Dungeness River, 91%. Some east side streams include the Yakima River at Parker 78%; the Wenatchee River at Peshastin, 109%; and the Okanogan River, 157%.

# SPOKANE



## WATER SUPPLY OUTLOOK:

The May 1 Forecasts for summer runoff within the Spokane River Basin is 99% of normal. This is up from 96% last month. The forecast is based on a snowpack 88% of average and a water year-to-date precipitation value 121% of normal. Precipitation for April was 150% of average. Temperatures in the basin were normal during April. Streamflow on the Spokane River was 107% of normal for April. May 1 storage in Coeur d'Alene Lake was 277,200 acre feet, 87% of normal.

For more information contact your local Soil Conservation Service office.

# SPOKANE RIVER BASIN

## STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	<----- DRIER ----- FUTURE CONDITIONS ----- WETTER ----->						
		CHANCE OF EXCEEDING *						
		90% (1000AF)	70% (1000AF)	50% (MOST PROBABLE) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	25 YR. (1000AF)
SPOKANE nr Post Falls (1,2)	MAY-SEP	1360	1790	1980	101	2170	2600	1957
	MAY-JUL	1290	1700	1880	101	2060	2470	1859
SPOKANE at Long Lake (2)	MAY-JUL	1620	1890	2030	99	2270	2540	2097

RESERVOIR STORAGE (1000AF)					WATERSHED SNOWPACK ANALYSIS		
RESERVOIR	USEABLE : CAPACITY:	** USEABLE STORAGE **			WATERSHED	NO. COURSES AVG'D	THIS YEAR AS % OF LAST YR. AVERAGE
	: YEAR	THIS YEAR	LAST YEAR	AVG.			
COEUR D'ALENE	291.2	277.2	392.2	317.2	Spokane River	12	129 88

\* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

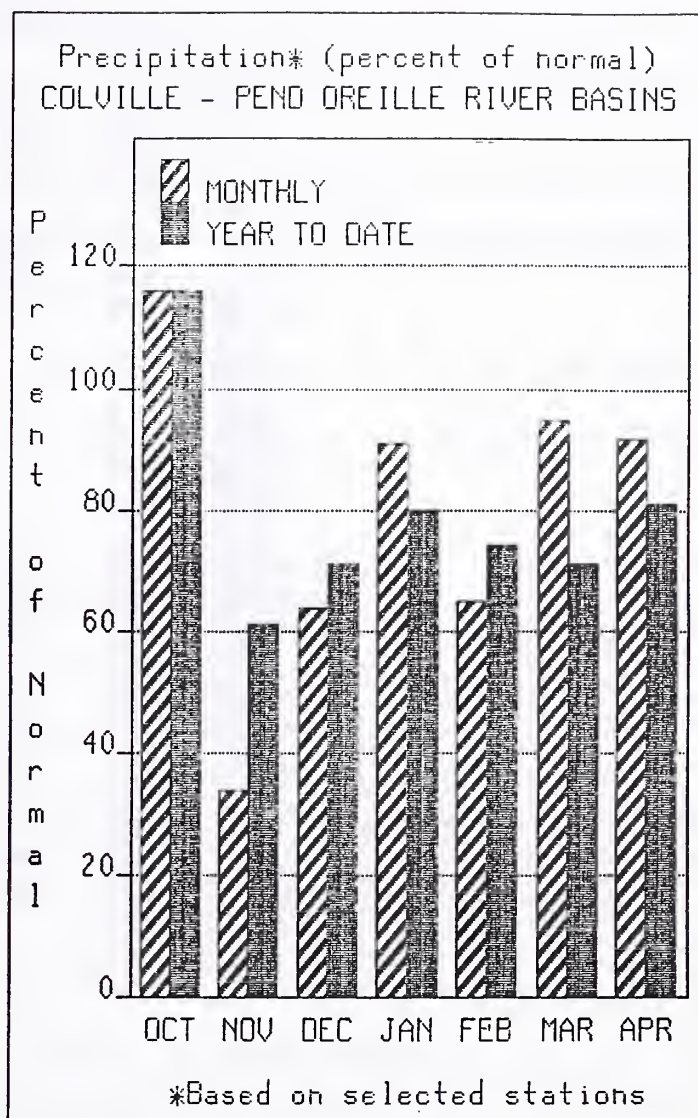
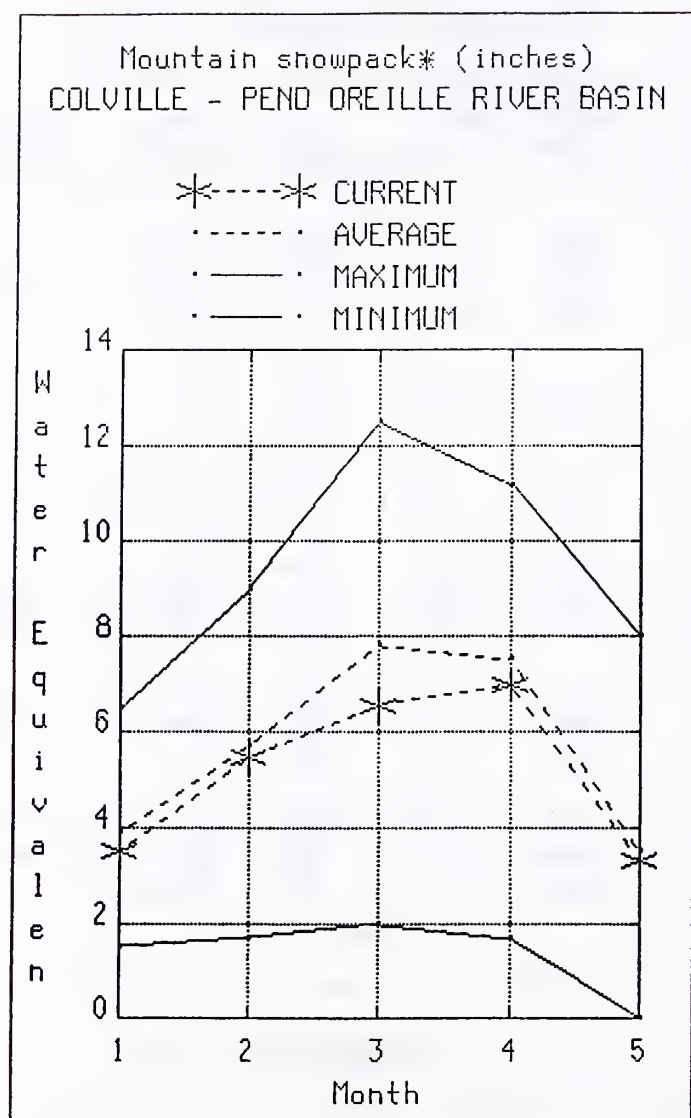
The average is computed for the 1961-1985 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

(2) - The value is natural flow - actual flow may be affected by upstream water management.



# COLVILLE - PEND OREILLE



## WATER SUPPLY OUTLOOK:

May 1 snow cover is 93% of average on the Pend Oreille, 96% on the Kettle. Snowpack at Bunchgrass Meadow SNOTEL site was 29.4 inches of water, the average May 1 reading is 29.1. Precipitation during April was 92% of average, bringing the water year-to-date to 82% of normal. April streamflow was 109% of normal on the Pend Oreille River, 123% on the Columbia at the International Boundary, and 125% on the Kettle River. The forecast for the Kettle River streamflow is 102% of normal, the Pend Oreille 108%, and the Colville River, 79% of normal for the summer runoff period. Temperatures were normal for April.

For more information contact your local Soil Conservation Service Office.

# COLVILLE - PEND OREILLE RIVER BASINS

## STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	<----- DRIER ----- FUTURE CONDITIONS ----- WETTER ----->						25 YR. (1000AF)
		CHANCE OF EXCEEDING *						
		90%	70%	50% (MOST PROBABLE)		30%	10%	
		(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)	
PEND OREILLE bl Box Canyon (1,2)	MAY-SEP	11900	13300	14100	108	14900	16500	13100
	MAY-JUL	10800	11900	12700	107	13500	14900	11840
	MAY-JUN	8990	9970	10600	107	11200	12400	9879
CHAMOKANE CK nr Long Lake	MAY-AUG	2.6	5.4	7.4	67	9.4	12.2	11.1
COLVILLE at Kettle Falls	MAY-SEP	41	55	64	71	74	88	90
	MAY-JUL	33	46	55	71	64	77	78
	MAY-JUN	28	40	48	71	56	68	68
KETTLE nr Laurier	MAY-SEP	1390	1560	1680	102	1800	1970	1644
	MAY-JUL	1300	1470	1580	102	1690	1860	1545
	MAY-JUN	1150	1290	1390	102	1490	1630	1362
COLUMBIA at Birchbank (1,2)	MAY-SEP	43700	46600	47900	115	49200	52100	41540
	MAY-JUL	34300	36600	37600	115	38600	40900	32600
	MAY-JUN	23900	25500	26200	115	26900	28500	22800
COLUMBIA at Grand Coulee Dm (1,2)	MAY-SEP	62600	66800	68700	115	70600	74800	59780
	MAY-JUL	51600	55000	56600	115	58200	61600	49060
	MAY-JUN	38600	41100	42300	115	43500	46000	36760

RESERVOIR STORAGE (1000AF)					WATERSHED SNOWPACK ANALYSIS		
RESERVOIR	USEABLE : CAPACITY:	** USEABLE STORAGE **			WATERSHED	NO. COURSES AVG'D	THIS YEAR AS % OF LAST YR. AVERAGE
		THIS YEAR	LAST YEAR	AVG.			
ROOSEVELT	5232.0	698.1	3066.8	1310.0	Colville River	0	0
BANKS	715.0	636.0	685.5	435.0	Pend Oreille River	9	119
					Kettle River	8	148

\* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1985 base period.

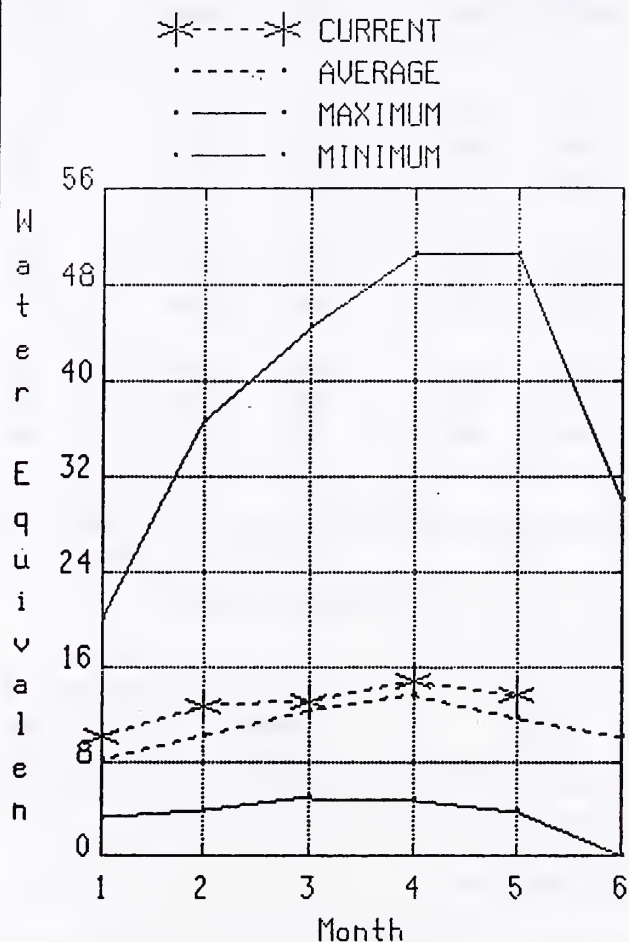
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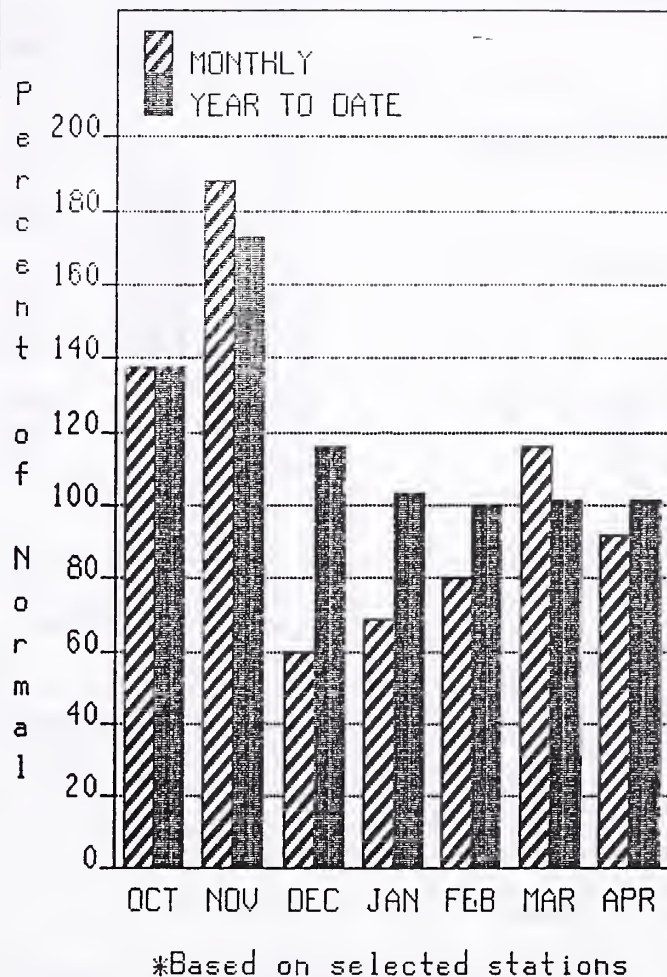


# OKANOGAN AND METHOW

Mountain snowpack\* (inches)  
OKANOGAN - METHOW RIVER BASINS



Precipitation\* (percent of normal)  
OKANOGAN - METHOW RIVER BASINS



## WATER SUPPLY

**OUTLOOK:** May 1 snow cover was 115% of average on the Okanogan, and 129% for the Methow Basin. April precipitation in the Okanogan-Methow was 92% of normal, with water year-to-date 101% of average. April streamflow on the Methow River was 130% of normal, 176% on the Okanogan River, and 264% on the Similkameen. Summer runoff for the area's small streams is expected to be below normal, with Salmon Meadows SNOTEL having lost its snowpack on April 21. Snow water content at the Harts Pass SNOTEL, elevation 6500 feet, was 82.8 inches of water content in the pack. Summer runoff forecast for the Okanogan River is 157% of normal; the Similkameen River, 161%, the highest in the state; and the Methow River, 120% of normal. Temperatures were one degree below normal for the month. Storage in the Conconully Reservoirs is 19,100 acre feet, which is 81% of capacity and 127% of May 1 average.

For more information contact your local Soil Conservation Service office.

# OKANOGAN - METHOW RIVER BASINS

## STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	<div style="display: flex; justify-content: space-between; align-items: center;"> <span>&lt;----- DRIER -----</span> <span>FUTURE CONDITIONS</span> <span>----- WETTER -----&gt;</span> </div>						
		CHANCE OF EXCEEDING *						
		90% (1000AF)	70% (1000AF)	50% (MOST PROBABLE) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	25 YR. (1000AF)
SIMILKAMEEN nr Nighthawk	MAY-SEP	2000	2110	2180	162	2250	2370	1345
	MAY-JUL	1840	1940	2010	161	2080	2180	1246
	MAY-JUN	1520	1620	1680	161	1740	1840	1042
OKANOGAN RIVER nr Tonasket	MAY-SEP	1990	2230	2400	157	2570	2810	1529
	MAY-JUL	1790	2000	2150	157	2300	2510	1368
	MAY-JUN	1490	1660	1770	157	1880	2050	1124
METHOW RIVER nr Pateros	MAY-SEP	935	1030	1090	121	1150	1250	898
	MAY-JUL	840	925	985	120	1040	1130	824
	MAY-JUN	695	775	830	121	885	965	688

RESERVOIR STORAGE (1000AF)					WATERSHED SNOWPACK ANALYSIS			
RESERVOIR	USEABLE CAPACITY:	** USEABLE STORAGE **			WATERSHED	NO. COURSES AVG'D	THIS YEAR AS % OF	
		THIS YEAR	LAST YEAR	AVG.			LAST YR.	AVERAGE
CONCONULLY LAKE (SALMON)	10.5	9.8	8.5	8.0	Okanogan River	26	190	116
CONCONULLY RESERVOIR	13.0	9.5	8.6	8.0	Methow River	2	190	129

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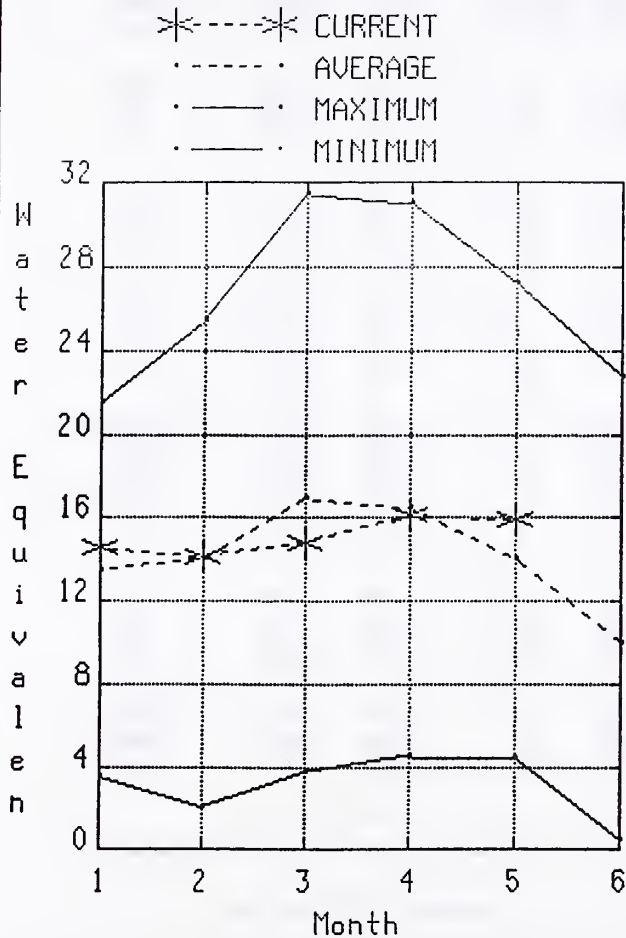
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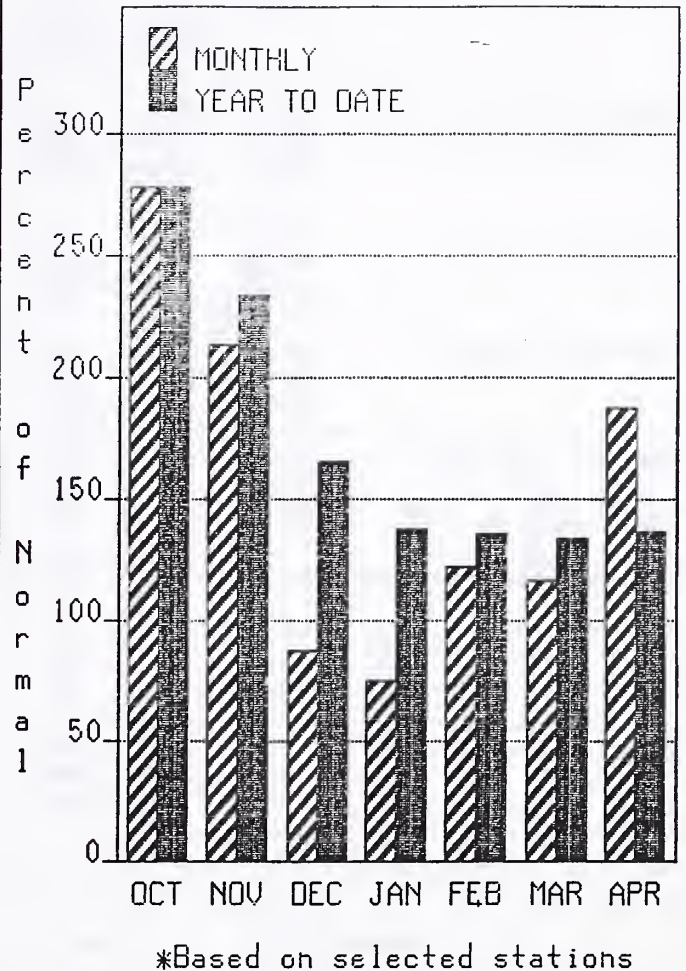


# WENATCHEE AND CHELAN

Mountain snowpack\* (inches)  
WENATCHEE - CHELAN RIVER BASINS



Precipitation\* (percent of normal)  
WENATCHEE - CHELAN RIVER BASINS



## WATER SUPPLY OUTLOOK:

May 1 snowpack in the Wenatchee Basin is 102%, up from 90% of average and the Chelan Basin 144%, up from 132%. Snowpack continues low along Colockum Ridge with the snow gone from Trough SNOTEL site in the Squilchuck - Stemilt drainage. Reservoir storage in Lake Chelan is 396,800 acre feet or 88% of May 1 average and 59% of capacity. Lyman Lake SNOTEL had the most snow water with 95.2 inches of water, this site would normally have 67.5 inches. Runoff for the Entiat River is forecast to be 95% of normal for the summer. Summer forecasts for the Chelan River are for 118%, Wenatchee River's runoff 109%, and 85% on the Squilchuck-Stemilt. Streamflow for April on the Chelan River was 125% of average and the Wenatchee River was 124% of normal. Precipitation during April was 187% of normal in the basin and 137% for the year-to-date.

For more information contact your local Soil Conservation Service office.

# WENATCHEE - CHELAN RIVER BASINS

## STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	<div style="text-align: center;"> <div>&lt;----- DRIER -----</div> <div>FUTURE CONDITIONS</div> <div>----- WETTER -----&gt;</div> </div>						
		CHANCE OF EXCEEDING *						
		90% (1000AF)	70% (1000AF)	50% (MOST PROBABLE) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	25 YR. (1000AF)
CHELAN RIVER at Chelan (1)	MAY-SEP	1050	1210	1270	118	1330	1480	1075
	MAY-JUL	920	1040	1100	118	1160	1280	931
	MAY-JUN	700	790	835	118	880	970	707
STEHEKIN R. at Stehekin	MAY-SEP	840	885	915	118	945	990	775
	MAY-JUL	695	735	760	118	785	825	645
	MAY-JUN	515	540	560	118	580	605	473
ENTIAT RIVER nr Ardenvoir	MAY-SEP	173	192	205	94	220	235	217
	MAY-JUL	156	173	185	95	197	215	195
	MAY-JUN	125	139	148	95	157	171	155
WENATCHEE R. at Peshastin	MAY-SEP	1130	1420	1620	109	1820	2110	1489
	MAY-JUL	1020	1270	1450	109	1630	1880	1327
	MAY-JUN	795	995	1130	110	1270	1470	1027
STEMILT nr Wenatchee (miners in)	MAY-SEP	72	99	117	85	135	162	138
ICICLE CREEK nr Leavenworth	APR-SEP	250	320	370	100	420	490	370
	APR-JUL	230	295	340	100	385	450	340
	APR-JUN	182	235	270	100	305	360	270
COLUMBIA R. b1 Rock Island Dam (2)	MAY-SEP	68700	72900	75800	117	78700	82900	65060
	MAY-JUL	56800	60300	62700	116	65100	68600	53860
	MAY-JUN	42600	45200	47000	116	48800	51400	40550

RESERVOIR STORAGE (1000AF)					WATERSHED SNOWPACK ANALYSIS		
RESERVOIR	USEABLE : CAPACITY:	** USEABLE STORAGE **			WATERSHED	NO. COURSES AVG'D	THIS YEAR AS % OF
	: YEAR	THIS YEAR	LAST YEAR	AVG.			----- LAST YR. AVERAGE
CHELAN LAKE	676.1	396.8	353.7	448.8	Chelan Lake Basin	3	156
					Entiat River	1	0
					Wenatchee River	5	120
					Squilchuck Creek	0	0
					Stemilt Creek	1	0
					Colockum Creek	1	0

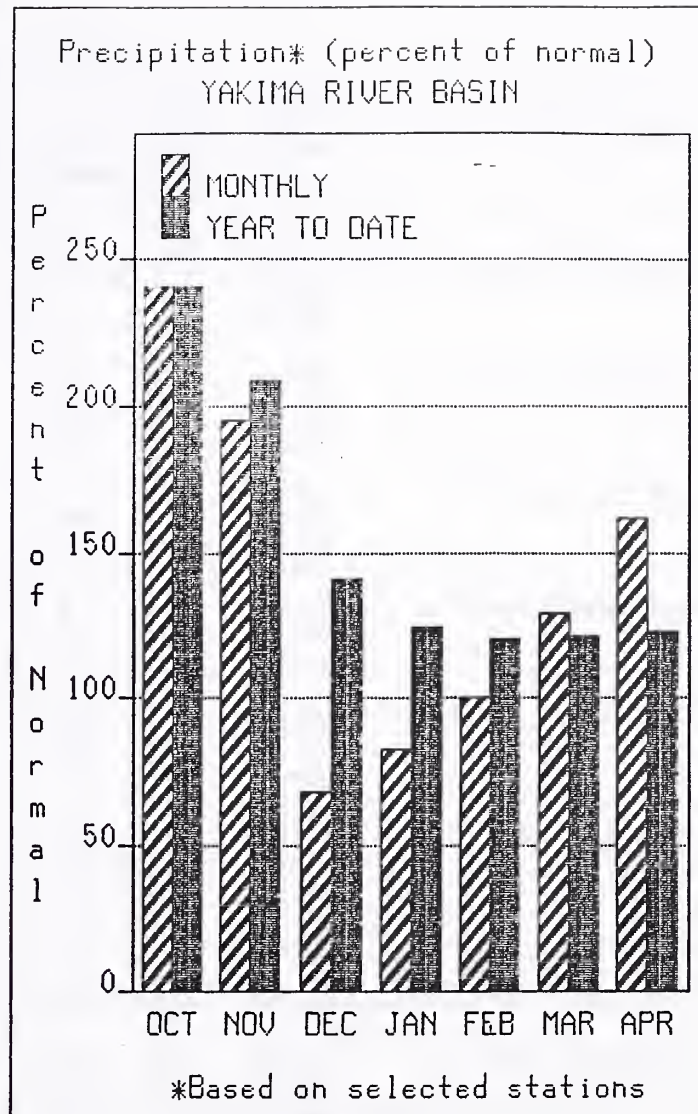
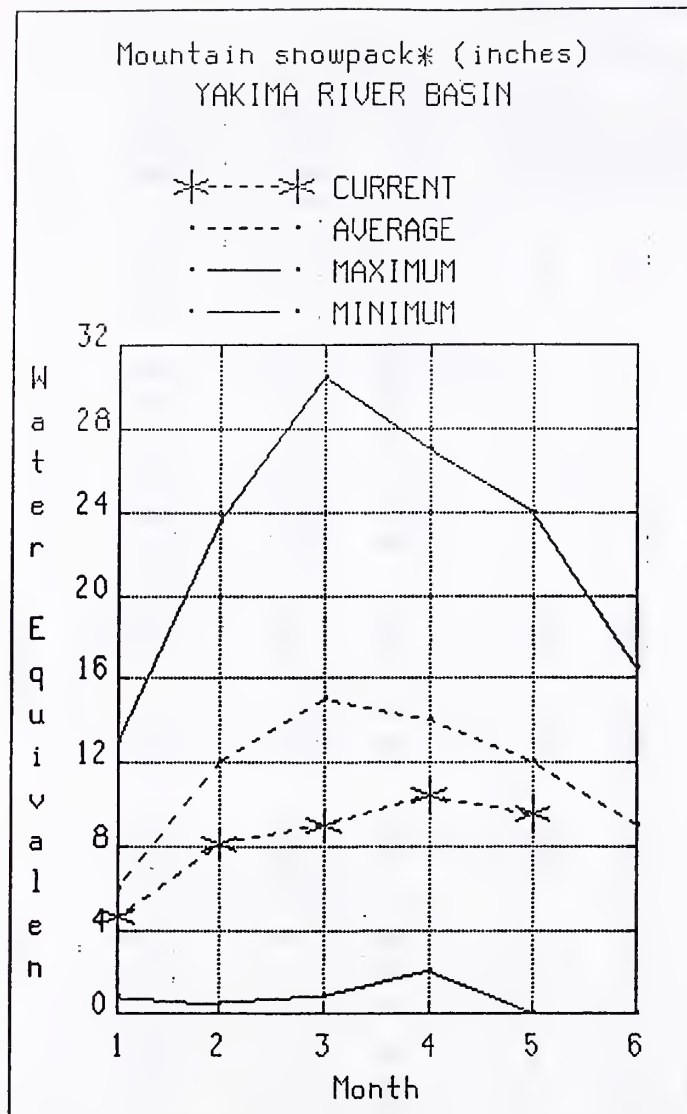
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(2) - The value is natural flow - actual flow may be affected by upstream water management.

# YAKIMA



## WATER SUPPLY OUTLOOK:

April precipitation was 162% of normal and 123% for the water year-to-date. The outlook for irrigation water for the summer is still good with May 1 reservoir storage for the five major reservoirs at 972,700 acre feet. May 1 snowpack is 80%, up from 60% of average on April 1, based upon 14 snow courses and SNOTEL readings. May 1 summer streamflow forecasts for the Yakima Basin vary throughout the basin as follows: the Yakima River at Cle Elum, 78%; Naches River, 80%; the Yakima River at Parker, 78%; Ahtanum Creek, 77%, and Tieton River 79%. April streamflows were near normal with the Yakima River at Parker 97% of normal, 119% on the Yakima near Cle Elum, and 104% on the Naches River. Temperatures were average for April. Volume forecasts for the Yakima Basin are for natural flow. As such, they may differ from the U. S. Bureau of Reclamation's forecast for the total water supply available which includes adjustments for reservoir operation and irrigation return flow.



# YAKIMA RIVER BASIN

## STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	<----- DRIER ----- FUTURE CONDITIONS ----- WETTER ----->						25 YR. (1000AF)
		CHANCE OF EXCEEDING *						
		90% (1000AF)	70% (1000AF)	50% (MOST PROBABLE) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	
YAKIMA RIVER at Martin (1)	MAY-SEP	70	82	87	80	92	104	109
	MAY-JUL	65	75	80	80	85	95	100
	MAY-JUN	56	65	69	81	73	82	85
YAKIMA RIVER at Cle Elum (2)	MAY-SEP	525	575	610	78	630	690	786
	MAY-JUL	440	495	530	78	565	620	682
	MAY-JUN	370	415	445	78	475	520	570
YAKIMA RIVER nr Parker (2)	MAY-SEP	1000	1190	1320	78	1450	1640	1682
	MAY-JUL	875	1040	1150	78	1260	1420	1469
	MAY-JUN	740	880	975	78	1070	1210	1250
KACHESS RIVER nr Easton (1)	MAY-SEP	65	78	84	78	90	103	108
	MAY-JUL	54	65	70	79	75	86	89
	MAY-JUN	46	56	60	78	64	74	77
CLE ELUM RIVER nr Roslyn (1)	MAY-SEP	255	295	315	80	335	375	393
	MAY-JUL	230	270	285	81	300	340	353
	MAY-JUN	185	215	230	80	245	275	289
BUMPING RIVER nr Nile (1)	MAY-SEP	75	92	99	80	106	123	123
	MAY-JUL	68	83	90	80	97	112	112
	MAY-JUN	55	67	72	80	77	89	90
AMERICAN RIVER nr Nile	MAY-SEP	70	78	83	78	88	96	107
	MAY-JUL	64	71	76	78	81	88	97
	MAY-JUN	53	58	62	78	66	71	79
TIE TON RIVER at Tieton (1)	MAY-SEP	124	154	168	79	182	210	213
	MAY-JUL	104	129	140	79	151	176	177
	MAY-JUN	79	98	107	79	116	135	136
NACHES RIVER nr Naches (2)	MAY-SEP	485	545	585	81	625	685	726
	MAY-JUL	425	480	515	80	550	605	645
	MAY-JUN	350	395	425	80	455	500	533
AHTANUM CREEK nr Tampico (2)	MAY-SEP	22	27	30	77	33	39	39
	MAY-JUL	19.0	24	27	77	30	35	35
	MAY-JUN	16.0	19.0	22	76	25	28	29

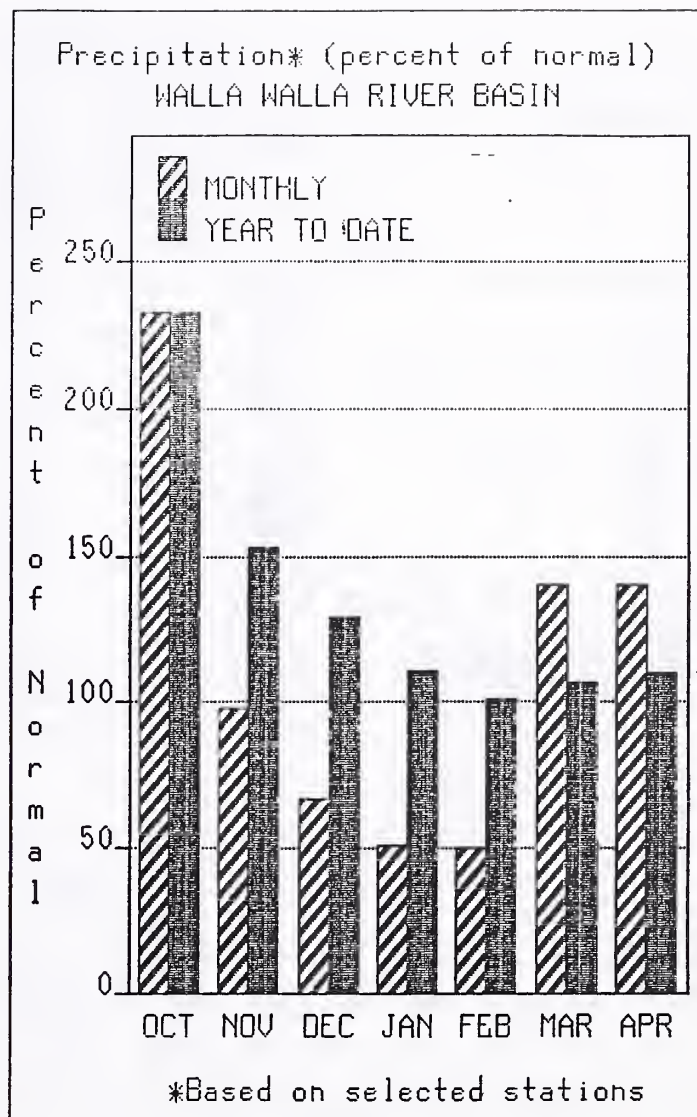
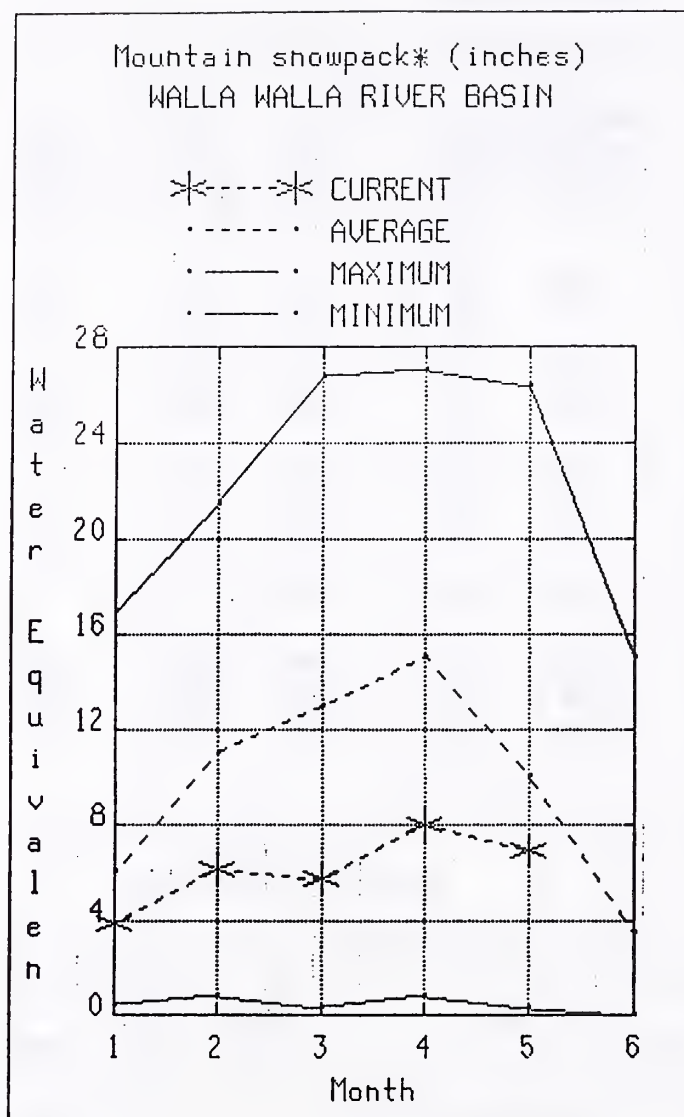
## RESERVOIR STORAGE (1000AF)

## WATERSHED SNOWPACK ANALYSIS

RESERVOIR	USEABLE CAPACITY:	** USEABLE STORAGE **			WATERSHED	NO. COURSES AVG'D	THIS YEAR AS % OF LAST YR. AVERAGE	
		THIS YEAR	LAST YEAR	AVG.				



# WALLA WALLA



## WATER SUPPLY OUTLOOK:

April streamflow was 89% of normal on the Walla Walla River, 49% for the Snake River, and 68% on the Grande Ronde River near Troy. May 1 snowpack is at 55%. April precipitation was 140% of average bringing the water year-to-date precipitation to 110% of normal. The forecast is for 70% of average streamflow in the Walla Walla River for the coming summer, the Grande Ronde, 56%; Snake River, 65%, and 65% for Mill Creek. Temperatures were one degree above average for April.

For more information contact your local Soil Conservation Service office.

# WALLA WALLA RIVER BASIN

## STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	<----- DRIER ----- FUTURE CONDITIONS ----- WETTER ----->						
		CHANCE OF EXCEEDING *					25 YR. (1000AF)	
		90% (1000AF)	70% (1000AF)	50% (MOST PROBABLE) (1000AF)	(% AVG.)	30% (1000AF)		10% (1000AF)
GRANDE RONDE at Troy (1)	MAY-JUL	275	445	520	56	595	765	924
	MAY-SEP	305	490	575	56	660	845	1027
SNAKE b1 Lower Granite Dam (1,2)	MAY-JUL	8510	10800	11800	65	12800	15100	18044
	MAY-SEP	9800	12400	13600	65	14800	17400	20862
MILL CREEK at Walla Walla	MAY-SEP	1.8	3.7	5.0	65	6.3	8.2	7.7
	MAY-JUL	1.7	3.6	4.9	65	6.2	8.1	7.5
	MAY-JUN	1.7	3.5	4.7	64	5.9	7.7	7.3
SF WALLA WALLA nr Milton Freewater	MAY-JUL	21	25	27	69	29	33	39
COLUMBIA R. at The Dalles (2)	MAY-SEP	76300	83200	87800	99	92400	96800	88790
	MAY-JUL	64200	69900	73800	100	77700	83400	74070
	MAY-JUN	50000	54400	57400	100	60400	64800	57430

RESERVOIR STORAGE (1000AF)					WATERSHED SNOWPACK ANALYSIS		
RESERVOIR	USEABLE :	** USEABLE STORAGE **			WATERSHED	NO. COURSES AVG'D	THIS YEAR AS % OF
	CAPACITY:	THIS YEAR	LAST YEAR	AVG.			LAST YR. AVERAGE
					Mill Creek	1	0 55

\* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

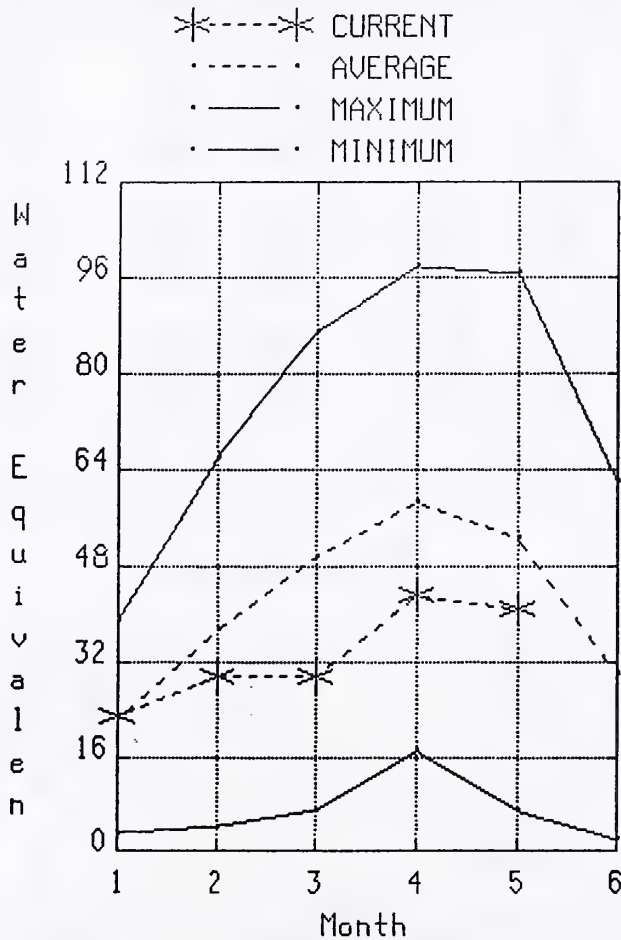
The average is computed for the 1961-1985 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

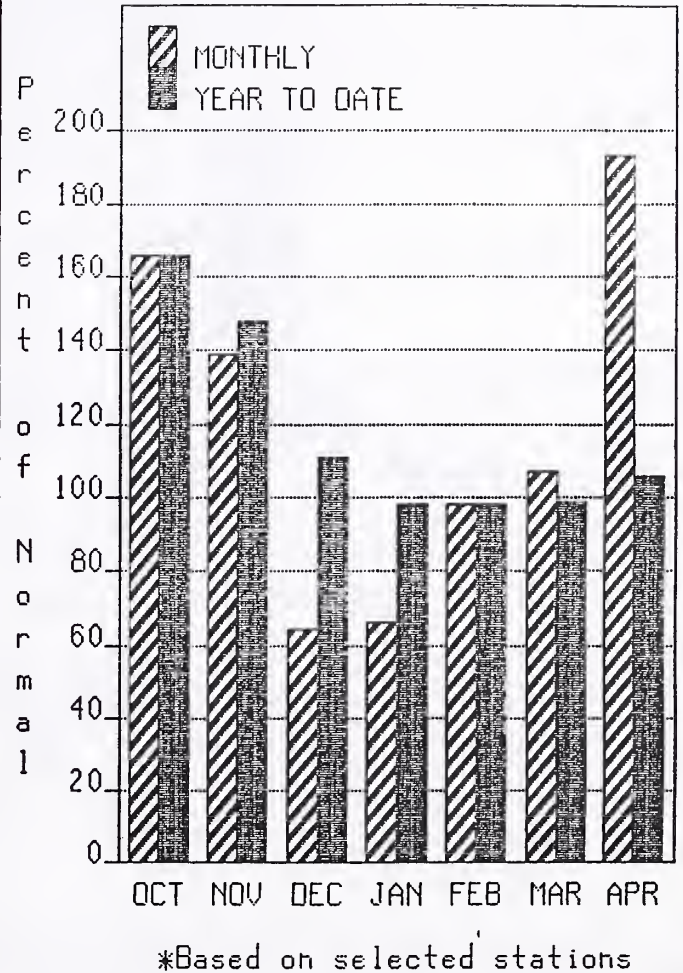
(2) - The value is natural flow - actual flow may be affected by upstream water management.

# COWLITZ AND LEWIS

Mountain snowpack\* (inches)  
COWLITZ - LEWIS RIVER BASINS



Precipitation\* (percent of normal)  
COWLITZ - LEWIS RIVER BASINS



## WATER SUPPLY OUTLOOK:

April precipitation was 197% of normal, bringing the water year-to-date precipitation to 111% of average. May 1 snow cover for the Cowlitz-Lewis River Basin is 78%, up from 74% of normal. The Paradise Park SNOTEL has the maximum water content for the basin with 81.8 inches of water, normal May 1 water content is 73.3 inches. Forecasts for summer runoff in the Lewis River are 85%, and for the Cowlitz River, 102%. April streamflow on the Cowlitz River was 139% of average, and 143% on the Lewis River. Temperatures were normal for April.

For more information contact your local Soil Conservation Service office.



# COWLITZ - LEWIS RIVER BASINS

## STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	<----- DRIER ----- FUTURE CONDITIONS ----- WETTER ----->							25 YR. (1000AF)
		CHANCE OF EXCEEDING *							
		90% (1000AF)	70% (1000AF)	50% (MOST PROBABLE) (1000AF) (% AVG.)		30% (1000AF)	10% (1000AF)		
LEWIS RIVER at Ariel (2)	MAY-SEP	545	670	755	85	840	970	892	
	MAY-JUL	425	530	600	82	670	775	732	
	MAY-JUN	340	425	485	80	545	630	606	
COWLITZ R. bl Mayfield Dam (2)	MAY-SEP	860	1320	1640	102	1960	2420	1604	
	MAY-JUL	725	1110	1380	102	1650	2040	1350	
	MAY-JUN	590	905	1120	103	1330	1650	1092	
COWLITZ R. at Castle Rock (2)	MAY-SEP	1070	1670	2070	101	2470	3070	2050	
	MAY-JUL	900	1390	1730	101	2070	2560	1706	
	MAY-JUN	730	1130	1400	102	1670	2070	1378	

RESERVOIR STORAGE (1000AF)					WATERSHED SNOWPACK ANALYSIS		
RESERVOIR	USEABLE :	** USEABLE STORAGE **			WATERSHED	NO. COURSES AVG'D	THIS YEAR AS % OF ----- LAST YR. AVERAGE
	CAPACITY:	THIS	LAST				
	: YEAR	YEAR	AVG.				
					Cowlitz River	6	96 98
					Lewis River	4	75 50

\* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1985 base period.

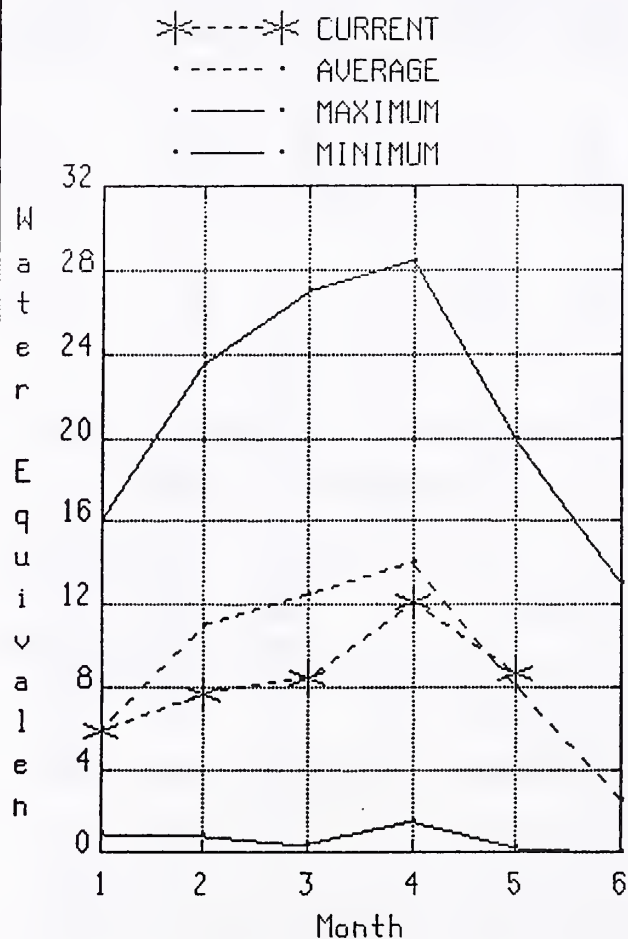
(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

(2) - The value is natural flow - actual flow may be affected by upstream water management.

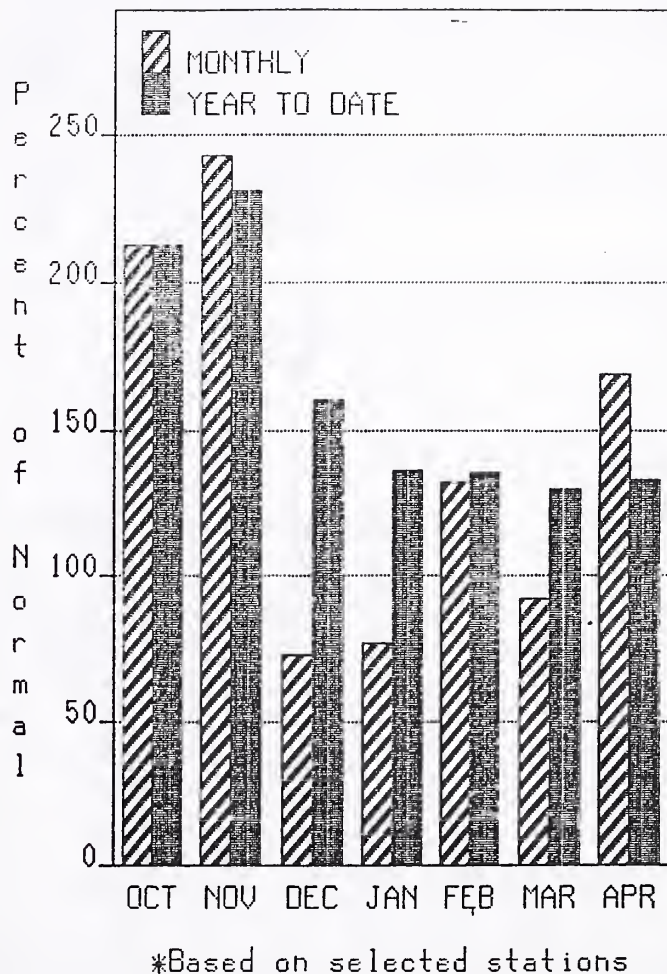


# WHITE - GREEN

Mountain snowpack\* (inches)  
WHITE - GREEN RIVER BASINS



Precipitation\* (percent of normal)  
WHITE - GREEN RIVER BASINS



## WATER SUPPLY OUTLOOK:

May 1 snowpack was 110% of normal on the White River and 109% in the Green Basin. Water content on May 1 at the Stampede Pass SNOTEL, at an elevation of 3860 feet, was 39.7 inches, this site has an May 1 average of 38.7 inches. April precipitation was 169% of normal, bringing the water year-to-date to 133% of average. Summer runoff is forecasted to be 89% on the Green River, and on the Cedar River. Temperatures were average for April.

For more information contact your local Soil Conservation Service office.

# WHITE - GREEN RIVER BASINS

## STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	<----- DRIER ----- FUTURE CONDITIONS ----- WETTER ----->						
		CHANCE OF EXCEEDING *						
		90% (1000AF)	70% (1000AF)	50% (MOST PROBABLE) (1000AF) (% AVG.)		30% (1000AF)	10% (1000AF)	25 YR. (1000AF)
GREEN R bl Howard Hanson Dam (2)	MAY-SEP	149	170	184	89	198	220	207
	MAY-JUL	128	146	158	89	170	188	177
	MAY-JUN	112	128	138	90	148	164	153
CEDAR RIVER nr Cedar Falls	MAY-SEP	54	61	66	89	71	79	74
	MAY-JUL	48	55	59	90	64	70	66
	MAY-JUN	40	45	49	91	53	58	54

RESERVOIR STORAGE (1000AF)					WATERSHED SNOWPACK ANALYSIS		
RESERVOIR	USEABLE :	** USEABLE STORAGE **			WATERSHED	NO. COURSES AVG'D	THIS YEAR AS % OF LAST YR. AVERAGE
	CAPACITY:	THIS YEAR	LAST YEAR	AVG.			
					White River	2	138 110
					Green River	3	129 109
					Cedar River	0	0 0

\* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

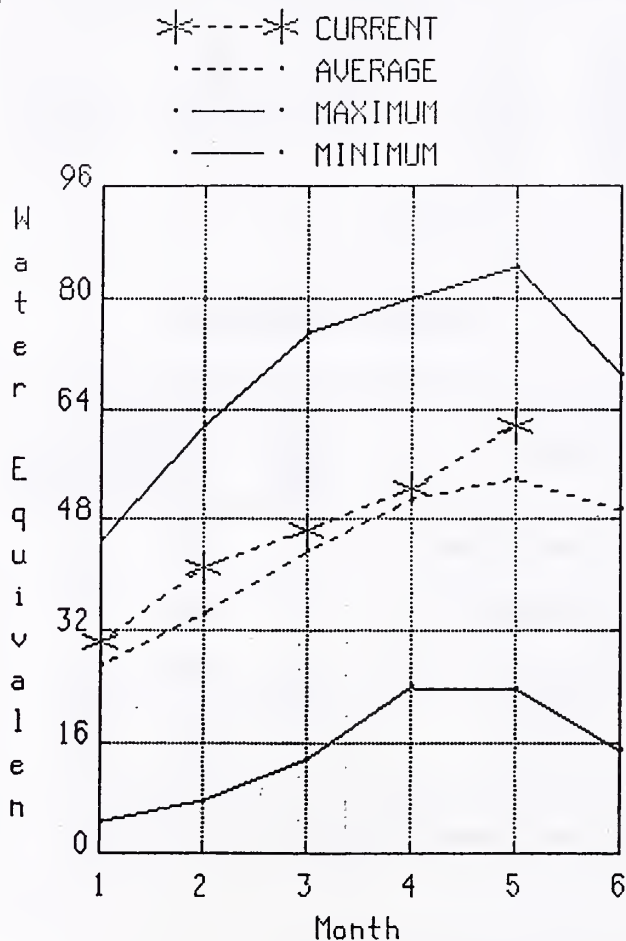
The average is computed for the 1961-1985 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

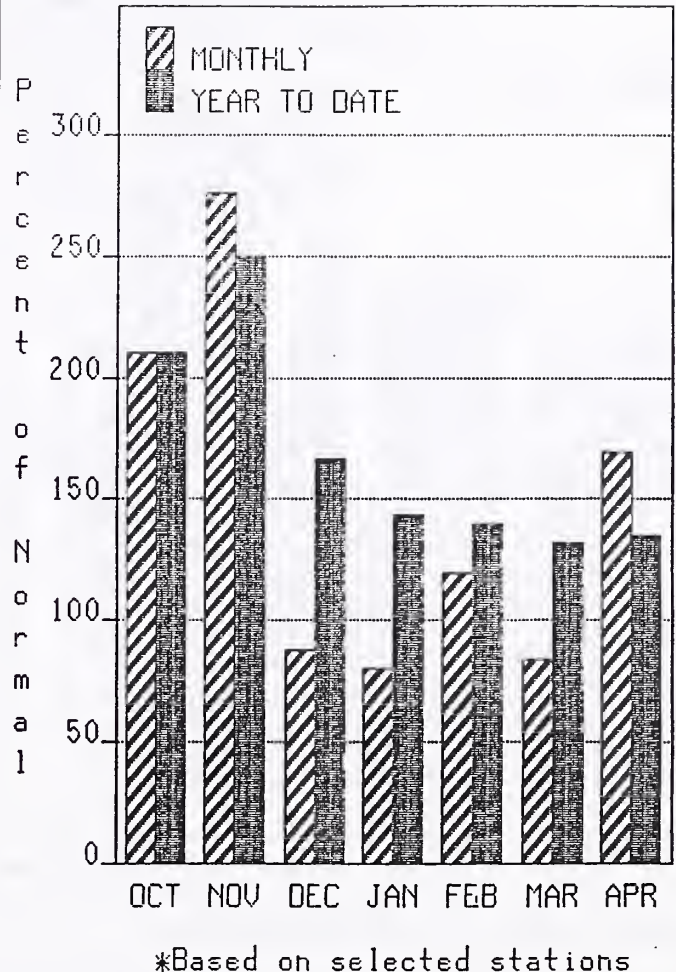
(2) - The value is natural flow - actual flow may be affected by upstream water management.

# NORTH PUGET SOUND

Mountain snowpack\* (inches)  
NORTH PUGET SOUND RIVER BASINS



Precipitation\* (percent of normal)  
NORTH PUGET SOUND RIVER BASINS



## WATER SUPPLY

### OUTLOOK:

April streamflow in the Skagit River was 134% of average. Forecast for the Skagit River is 135% of normal for the spring and summer period. May 1 snow cover in the Skagit Basin is 143% of normal, and in the Baker River it was 109%. Rainy Pass SNOTEL at elevation 4780 feet, has 63.5 inches of water content; normal May 1 water content is 45.4 inches. May 1 reservoir storage is near average, with Ross Lake reservoir at 93% of normal and 43% of capacity. Precipitation for April was 169% of average with a water year-to-date at 135% of normal. April temperatures were normal.

For more information contact your local Soil Conservation Service Office.



# NORTH PUGET SOUND RIVER BASINS

## STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	<div style="display: flex; justify-content: space-between; align-items: center;"> <span>&lt;----- DRIER -----</span> <span>FUTURE CONDITIONS</span> <span>----- WETTER -----&gt;</span> </div>						
		CHANCE OF EXCEEDING *						
		90%	70%	50% (MOST PROBABLE)		30%	10%	25 YR.
		(1000AF)	(1000AF)	(1000AF) (% AVG.)		(1000AF)	(1000AF)	(1000AF)
SKAGIT RIVER at Newhalem (2)	MAY-SEP	2480	2670	2790	135	2910	3100	2062
	MAY-AUG	2300	2470	2590	135	2710	2880	1919
	MAY-JUL	2050	2200	2300	136	2400	2550	1689
	MAY-JUN	1800	1930	2020	136	2110	2240	1485

RESERVOIR STORAGE (1000AF)					WATERSHED SNOWPACK ANALYSIS			
RESERVOIR	USEABLE : CAPACITY:	** USEABLE STORAGE **			WATERSHED	NO. COURSES AVG'D	THIS YEAR AS % OF	
		THIS YEAR	LAST YEAR	AVG.			LAST YR.	AVERAGE
ROSS	1404.1	602.5	763.3	644.4	Snoqualmie River	1	101	74
DIABLO RESERVOIR	90.6	85.7	85.1	---	Skykomish River	2	100	104
GORGE RESERVOIR	NO REPORT				Skagit River	13	165	133
					Baker River	9	146	109

\* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

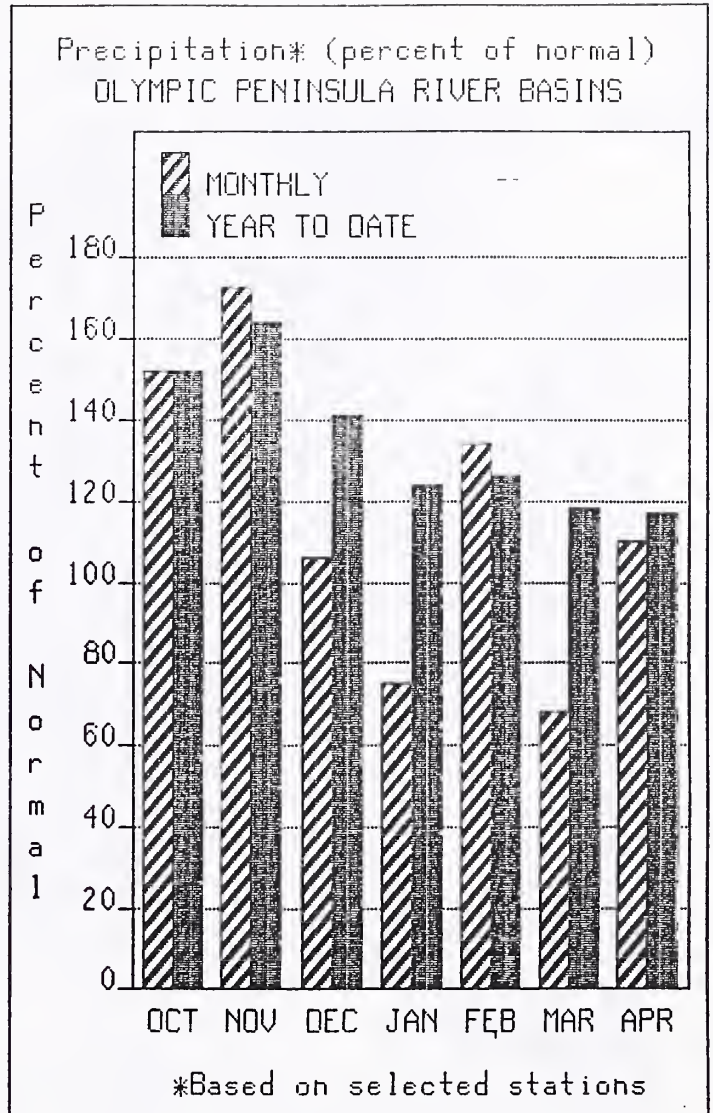
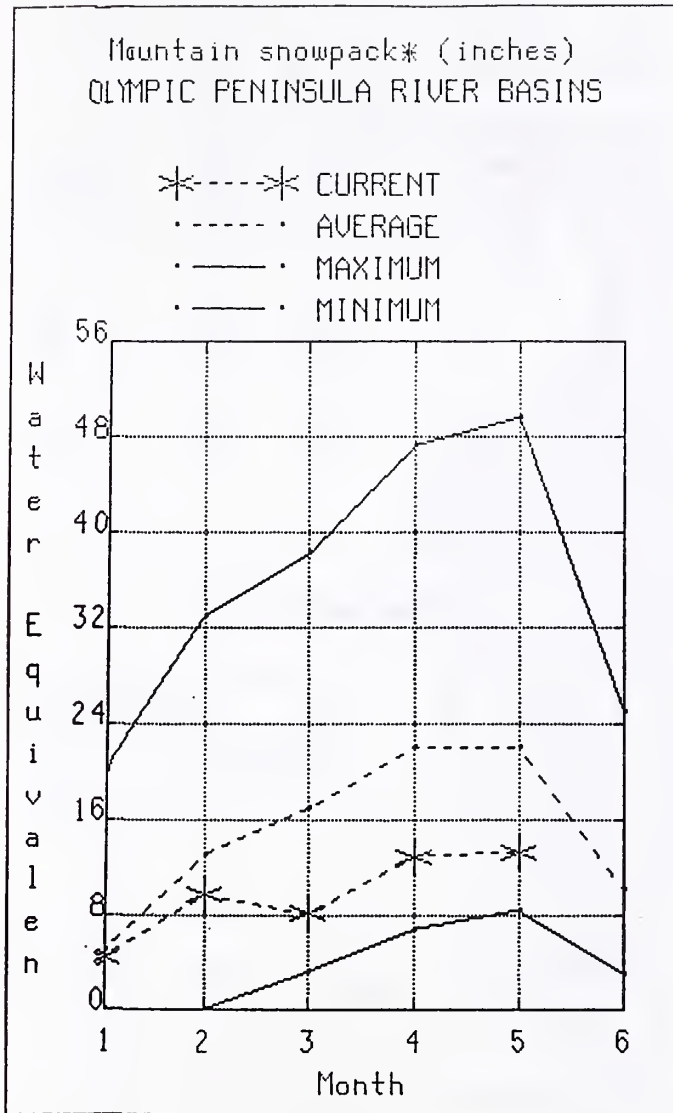
The average is computed for the 1961-1985 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

(2) - The value is natural flow - actual flow may be affected by upstream water management.



# OLYMPIC



## WATER SUPPLY OUTLOOK:

April precipitation was 110% of average, with water year-to-date precipitation accumulation at 117% of normal. April 1 snow cover in the Olympic basins is at 51% of normal on the Elwha River and 70% on the Dungeness River. May forecasts of runoff for streamflow in the basin are for 91% of average on the Dungeness River, and 81% for the Elwha River. The Big Quilcene can expect below normal runoff this summer. The Mount Crag SNOTEL near Quilcene had 13.1 inches on May 1, with the snowpack at Hurricane Ridge at 38 inches in depth and 11.3 inches of water. Temperatures were normal for April.

For more information contact your local Soil Conservation Service office.

# OLYMPIC PENINSULA RIVER BASINS

## STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	<div> <div>&lt;----- DRIER -----</div> <div>FUTURE CONDITIONS</div> <div>----- WETTER -----&gt;</div> </div>						
		CHANCE OF EXCEEDING *						
		90%	70%	50% (MOST PROBABLE)		30%	10%	25 YR.
		(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)	(1000AF)
DUGENESS RIVER nr Sequim	MAY-SEP	102	116	125	91	134	148	137
	MAY-JUL	81	92	99	91	106	117	109
	MAY-JUN	71	80	87	90	94	103	97
ELWHA RIVER nr Port Angeles	MAY-SEP	290	335	365	81	395	440	451
	MAY-JUL	240	275	300	83	325	360	363

RESERVOIR STORAGE					(1000AF)	WATERSHED SNOWPACK ANALYSIS				
RESERVOIR	USEABLE :	** USEABLE STORAGE **			WATERSHED	NO. COURSES AVG'D	THIS YEAR AS % OF			
	CAPACITY:	THIS	LAST	-----						
	:	YEAR	YEAR	AVG.			LAST YR.	AVERAGE		
						Elwha River	1	94	51	
						Morse Creek	1	124	83	
						Dungeness River	1	336	70	
						Quilcene River	0	0	0	
						Wynoochee River	1	47	28	

\* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1985 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

(2) - The value is natural flow - actual flow may be affected by upstream water management.





BASIN SUMMARY OF  
SNOW COURSE DATA

MAY 1991

SNOW COURSE	ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 1961-85	SNOW COURSE	ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 1961-85	
PEND OREILLE RIVER							MORSE LAKE	PILLOW	5400	5/01/91	---	63.5S	38.2	55.3
BENTON MEADOW	2370	5/01/91	---	.0E	.0	.0	OLALLIE MDWS	PILLOW	3960	5/01/91	---	50.9S	50.6	69.0
BENTON SPRING	4920	5/01/91	---	13.7E	6.1	15.4	SASSE RIDGE	PILLOW	4200	5/01/91	---	25.2S	29.9	33.5
BOYER MOUNTAIN	5250	4/29/91	42	16.2	13.2	24.8	STAMPEDE PASS	PILLOW	3860	4/01/91	---	39.7S	45.6	38.7
BONCHGRASS MEADOWS	5000	4/30/91	59	26.2	16.2	29.2	TUNNEL AVENUE	PILLOW	2450	4/30/91	11	4.8	6.4	14.3
BONCHGRASS MOWPILLOW	5000	5/01/91	---	29.4	21.7	29.1	WHITE PASS ES	PILLOW	4500	5/01/91	---	18.6S	20.5	24.8
REART LAKE TRAIL	4800	4/30/91	45	17.9	14.0	17.4	ANTANUM CREEK							
NOODOO BASIN	6050	4/30/91	128	55.7	47.6	53.2	GREEN LAKE	PILLOW	6000	5/01/91	---	18.2S	13.2	20.9
NOODOO CREEK	5900	4/30/91	114	47.4	44.2	49.3	MILL CREEK							
LOOKOUT	5140	4/29/91	66	27.4	26.4	32.7	HIGH RIDGE	PILLOW	4980	5/01/91	---	11.5S	.0	20.8
NELSON	CAN. 3100	5/01/91	13	5.6	5.4	7.2	TOUCHET #2	PILLOW	5530	5/01/91	---	21.8S	--	15.9
CATTLE RIVER							LEWIS - COWLITZ RIVERS							
BARNES CREEK	CAN. 5300	4/28/91	55	23.4	18.8	20.5	JUNE LAKE	PILLOW	3200	5/01/91	---	12.0S	23.0	24.8
BIG WHITE MTN	CAN. 5510	4/29/91	50	20.2	10.8	19.9	LOVE PINE	PILLOW	3800	5/01/91	---	21.2S	23.2	45.1
CARMI	CAN. 4100	4/30/91	3	1.2	.0	1.7	PARADISE PARK	PILLOW	5500	5/01/91	---	81.8S	74.4	73.3
FARROW	CAN. 4000	4/30/91	14	5.6	2.5	10.4	PITTAIL PEAK	PILLOW	5900	5/01/91	---	66.3S	57.8	52.1
GRAYSTOKE LAKE	CAN. 5940	4/29/91	48	19.4	16.0	18.1	POTATO HILL	PILLOW	4500	5/01/91	---	19.8S	12.3	27.3
MONASHEE PASS	CAN. 4500	4/28/91	34	14.1	9.6	12.8	SNEEP CANYON	PILLOW	4050	5/01/91	---	29.5S	60.6	43.7
TRAPPING CK LOW	CAN. 3050	4/29/91	0	.0	.0	.0	SPENCER MOW	PILLOW	3400	5/01/91	---	9.8S	20.2	26.6
TRAPPING CK UP	CAN. 4460	4/29/91	4	1.6	.0	5.6	SPIRIT LAKE	PILLOW	3100	5/01/91	---	.0S	.0	.0
SPOKANE RIVER							SURPRISE LKS	PILLOW	4250	5/01/91	---	33.6S	35.3	55.6
ABOVE BURKE	4100	5/01/91	---	7.0E	.0	18.6	WHITE PASS ES	PILLOW	4500	5/01/91	---	18.6S	20.5	24.8
FOURTH OF JULY BOM	3200	4/29/91	0	.0	--	.4	WHITE RIVER							
LOOKOUT	5140	4/29/91	66	27.4	26.4	32.7	CORRAL PASS	PILLOW	6000	5/01/91	---	40.1S	37.0	38.9
LOST LAKE	6110	4/30/91	162	69.7	46.9	60.1	MORSE LAKE	PILLOW	5400	5/01/91	---	63.5S	38.2	55.3
MOBQUITO RIOGE	5200	5/01/91	---	31.1E	30.3	36.6	GREEN RIVER							
MOBQUITO	PILLOW 5200	5/01/91	---	31.9	31.0	37.0	COOGAR MTW.	PILLOW	3200	5/01/91	---	14.1S	4.4	13.8
SHERWIN	3200	4/29/91	0	.0	.0	4.6	GRASS MOWTAIN #2		2900	4/29/91	0	.0	.0	--
BOWBET	5540	5/01/91	---	34.7E	18.6	32.8	LESTER CREEK		3100	4/29/91	40	15.2	15.6	--
SUNSET	PILLOW 5540	5/01/91	---	38.9	26.0	35.1	LYNN LAKE		4000	4/29/91	57	25.7	11.7	20.7
WENMAN LAKE							SAWHILL RIDGE		4700	4/29/91	60	25.7	27.4	--
QUARTZ PEAK	PILLOW 4700	5/01/91	---	15.3	17.1	--	STAMPEDE PASS	PILLOW	3860	4/01/91	---	39.7S	45.6	38.7
OKANOGAN RIVER							TWIN CAMP		4100	4/29/91	48	20.2	20.3	--
ABERDEEN LAKE	CAN. 4300	4/30/91	2	1.0	.0	1.7	SNOQUALMIE RIVER							
BRENDA MINE	CAN. 4800	4/25/91	31	9.8	1.5	9.8	KROMONA MINE		2400	5/01/91	29	14.8	22.1	--
BROOKMERE	CAN. 3200	4/27/91	16	5.0	1.2	5.1	OLALLIE MDWS	PILLOW	3960	5/01/91	---	50.9S	50.6	69.0
EWORBY	CAN. 6200	4/29/91	106	48.1	44.9	42.9	OLNEY PASS		3250	5/01/91	12	5.1	6.9	--
ESPERON CK. MID	CAN. 4690	4/28/91	28	11.2	1.2	11.9	SKYKOMISN RIVER							
FREEZEOUT CK. TRAIL	3500	5/01/91	31	12.0	2.4	7.8	STAMPEDE PASS	PILLOW	3860	4/01/91	---	39.7S	45.6	38.7
GREYBACK RES	CAN. 5120	4/29/91	30	10.2	3.0	7.7	STEVENS PASS	PILLOW	4070	5/01/91	---	43.2S	37.2	41.3
HANILTON HILL	CAN. 4890	4/29/91	40	17.4	7.6	12.6	SKAGIT RIVER							
HARTS PASS	6500	4/30/91	133	59.9	38.4	46.8	BEAVER CREEK TRAIL		2200	5/01/91	0	.0	.0	4.9
HARTS PASS	PILLOW 6500	5/01/91	---	82.8S	43.5	56.7	BEAVER PASS		3680	5/01/91	69	28.3	21.5	29.3
ISIWOK LAKE	CAN. 5500	4/29/91	27	9.7	.1	6.3	BROWN TOP	AM	6000	5/01/91	197	91.5	56.4	63.3
LIGHTNING LAKE	CAN. 4000	4/29/91	48	18.8	8.5	11.5	OZVILS PARK		5900	5/01/91	158	68.6	41.4	46.2
LOST BORSE MTN	CAN. 6300	4/29/91	49	17.7	8.1	10.3	FREEZEOUT CK. TRAIL		3500	5/01/91	31	12.0	2.4	7.8
MCCOLLOCN	CAN. 4200	4/29/91	3	.9	.0	2.4	HARTS PASS	PILLOW	6500	4/30/91	133	59.9	38.4	46.8
MISSEZULA MTN	CAN. 5090	4/28/91	22	5.4	2.1	7.0	HARTS PASS	PILLOW	6500	5/01/91	---	82.8S	43.5	56.7
MISSION CREEK	CAN. 5800	4/29/91	60	25.1	20.9	21.8	KLESILKA	CAN.	3710	4/29/91	24	10.2	2.2	8.3
NONASHEE PASS	CAN. 4500	4/28/91	34	14.1	9.6	12.8	LIGHTNING LAKE	CAN.	4000	4/29/91	48	18.8	8.5	11.5
MT. KOBAB	CAN. 5900	4/28/91	30	10.1	6.7	13.3	LYMAN LAKE	PILLOW	5900	5/01/91	---	95.2S	66.5	67.5
OYAMA LAKE	CAN. 4400	4/26/91	12	3.9	.0	6.4	MEADOWS CABIN		1900	5/01/91	0	.0	.0	1.3
POSTILL LAKE	CAN. 4500	5/01/91	16	6.0	.6	7.4	NEW BOZOMEEN LAKE		2800	5/01/91	0	.0	.0	6.0
SALMON MOWS	PILLOW 4500	5/01/91	---	.0S	.0	.0	RAINY PASS		4780	4/30/91	122	53.0	37.8	41.5
SILVER STAR MTW	CAN. 6000	4/28/91	69	30.8	23.8	29.7	RAINY PASS	PILLOW	4780	5/01/91	---	63.5S	38.5	45.4
SOMMERLAW RES	CAN. 4200	4/25/91	16	5.7	.2	6.3	THUNDER BASIN		4200	5/01/91	62	23.4	17.8	22.8
SUNDAY SUMMIT	CAN. 4300	4/29/91	3	.9	.0	.8	BAKER RIVER							
TROUT CREEK	CAN. 4690	4/28/91	16	5.4	.6	4.8	DOCK BOTTE	AM	3800	4/30/91	120	65.0	43.7	70.8
VABOX CREEK	CAN. 4600	4/30/91	13	4.6	1.0	3.0	EASY PASS	AM	5200	4/30/91	204	99.0	65.6	89.2
WHITE ROCKS MTN	CAN. 6000	4/30/91	49	20.5	10.9	22.4	JASPER PASS	AM	5400	4/30/91	216	109.0	68.0	93.0
NETBOW RIVER							NARTEM LAKE	AM	3600	4/30/91	168	91.0	59.9	78.8
HARTS PASS	6500	4/30/91	133	59.9	38.4	46.8	MT. BLUM	AM	5800	4/30/91	---	86.0E	64.9	72.3
HARTS PASS	PILLOW 6500	5/01/91	---	82.8S	43.5	56.7	ROCKY CREEK	AM	2100	4/30/91	42	21.0	11.6	20.7
SALMON MOWS	PILLOW 4500	5/01/91	---	.0S	.0	7.4	SCREIBERS MOW	AM	3400	4/30/91	108	60.0	43.4	59.7
CHELAN LAKE BASIN							SP THUNDER CK	AM	2200	4/30/91	---	1.3E	.0	1.3
LYNAN LAKE	PILLOW 5900	5/01/91	---	95.2S	66.5	67.5	WATSON LAKES	AM	4500	4/30/91	142	72.0	57.3	70.7
MINERS RIOGE	PILLOW 6200	5/01/91	---	77.1S	55.5	--	ELMHA RIVER							
PARK CK RIOGE	PILLOW 4600	5/01/91	---	61.1S	35.8	39.9	BURRICANE		4500	4/27/91	32	12.2	13.0	23.9
RAINY PASS	4780	4/30/91	122	53.0	37.8	41.5	MORSE CREEK							
RAINY PASS	PILLOW 4780	5/01/91	---	63.5S	38.5	45.4	COX VALLEY		4500	4/27/91	78	34.0	27.4	40.8
ENTIAI RIVER							DUNGNESS RIVER							
POPE RIOGE	PILLOW 3540	5/01/91	---	.8S	.0	6.7	DEER PARK		5200	4/26/91	38	14.8	4.4	21.1
WENATCREE RIVER							QUILCENE RIVER							
BLEWETT PASS#2PILLOW	4270	5/01/91	---	2.1S	2.1	14.2	MOUNT CRAG	PILLOW	4050	5/01/91	---	14.2S	13.2	--
FISB LAKE	PILLOW 3370	5/01/91	---	22.8S	30.7	26.6	WYNOOCBEE RIVER							
LYMAN LAKE	PILLOW 5900	5/01/91	---	95.2S	66.5	67.5	CARROL PASS		3650	5/01/91	21	8.3	17.5	30.0
STEVENS PASS	PILLOW 4070	5/01/91	---	43.2S	37.2	41.3								
TROUGH #2	PILLOW 5310	5/01/91	---	.0S	.0	5.6								
OPPER WHEELER	PILLOW 4400	5/01/91	---	4.0S	.0	8.8								
STEMILT CREEK														
UPPER WHEELER	PILLOW 4400	5/01/91	---	4.0S	.0	8.8								
COLOCKUM CREEK														
TRODGB #2	PILLOW 5310	5/01/91	---	.0S	.0	5.6								
YAKINA RIVER														
BIG BOULDER CREEK	3200	5/01/91	0	.0	--	8.7								
BLEWETT PASS#2PILLOW	4270	5/01/91	---	2.1S	2.1	14.2								
BUMPING LAKE	3450	4/30/91	2	1.0	1.5	8.7								
BUMPING LAKE (NEW)	3400	4/30/91	4	1.8	3.0	12.5								
BUMPING RIDGE	PILLOW 4600	5/01/91	---	21.8S	21.0	23.4								
CORRAL PASS	PILLOW 6000	5/01/91	---	40.1S	37.0	38.9								
FISB LAKE	3370	5/01/91	32	14.9	--	23.8								
FISR LAKE	PILLOW 3370	5/01/91	---	22.8S	30.7	26.6								
GREEN LAKE	PILLOW 6000	5/01/91	---	18.2S	13.2	20.9								
GROOSE CAMP	PILLOW 5380	5/01/91	---	6.0S	.0	12.9								





